

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A liquid ejecting head, comprising: a flow passage formation section including:

a plurality of nozzle openings, ejecting liquid therefrom;

a plurality of pressure generation parts, corresponding to the nozzle openings respectively;

a plurality of liquid supply passages, communicating with the pressure generation parts respectively for supplying liquid thereto; and

a plurality of partition wall parts, each separating one liquid supply passage and its corresponding pressure generation part from another liquid supply passage and its corresponding pressure generation part;

a sealing section, sealing the flow passage formation section; and a head case section, provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section corresponding to both the liquid supply passage partition wall parts and the liquid supply passage of the flow passage formation section, and the sealing section has a first area and a second area being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;
and

wherein the head case section is separated by a vacancy from the sealing section at the first area opposed to the liquid supply passage; and

wherein the second area is placed in a side close to pressure generation parts relative to the first area.

2. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the head case section, provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section, and

wherein the second part inside of the area where the head case section is provided on the sealing section is placed in a part of each of the liquid supply passage partition wall parts.

3. (Previously presented) The liquid ejecting head as set forth in claim 2, wherein the second part is placed in at least one of a base side close to the pressure generation parts in the liquid supply passage partition wall parts and a tip side away from the pressure generation parts in the liquid supply passage partition wall parts.

4. (Previously presented) The liquid ejecting head as set forth in claim 3, wherein the second part placed in the tip sides of the liquid supply passage partition wall parts is formed contiguously.

5. (Previously presented) The liquid ejecting head as set forth in claim 3, wherein the second part is placed only in the tip side of the liquid supply passage partition wall parts.

6. (Previously presented) The liquid ejecting head as set forth in claim 3, wherein the sealing section has a third part outside of the area where the head case section is placed; and

wherein the third part is placed in at least one of the tip side of the liquid supply passage partition wall parts and the base side of the liquid supply passage partition wall parts.

7. (Currently Amended) ~~The~~ A liquid ejecting head as set forth in claim 2, comprising: a flow passage formation section including:

a plurality of nozzle openings, ejecting liquid therefrom;

a plurality of pressure generation parts, corresponding to the nozzle openings

respectively;

a plurality of liquid supply passages, communicating with the pressure generation parts respectively for supplying liquid thereto; and

a plurality of partition wall parts, each separating one liquid supply passage and its corresponding pressure generation part from another liquid supply passage and its corresponding pressure generation part;

a sealing section, sealing the flow passage formation section; and a head case section, provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section corresponding to both the liquid supply passage partition wall parts and the liquid supply passage of the flow passage formation section, and the sealing section has a first area and a second area being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;

wherein the head case section is separated by a vacancy from the sealing section at the first area opposed to the liquid supply passage;

wherein the sealing section has a first part and a second part being greater in thickness than the first part;

wherein the first area of the sealing section is formed with the first part;

wherein the second area of the sealing section is formed with the first part and the second part;

wherein the head case section, provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section;

wherein the second part inside of the area where the head case section is provided on the sealing section is placed in a part of each of the liquid supply passage partition wall parts;

wherein the second part has a first portion and a second portion which are separated from each other;

wherein the first portion of the second part is placed only on a base side close to the pressure generation parts in the liquid supply passage partition wall parts;

wherein the second portion of the second part is placed only on a tip side away from the pressure generation parts in the liquid supply passage partition wall parts; and

wherein a reinforcement member not contributing to expansion is placed in an intermediate part between the tip side and the base side of the liquid supply passage partition wall parts.

8. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the second part and the first part are separate bodies.

9. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the second part of the sealing section is comprised of a metal thin film.

10. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the second part of the sealing section is comprised of a stainless steel thin film; and wherein the first part is comprised of a resin thin film.

11. (Currently Amended) ~~The A~~ liquid ejecting head as ~~set forth in claim 24~~,
comprising: a flow passage formation section including;
a plurality of nozzle openings, ejecting liquid therefrom;
a plurality of pressure generation parts, corresponding to the nozzle openings
respectively;
a plurality of liquid supply passages, communicating with the pressure generation parts
respectively for supplying liquid thereto; and

a plurality of partition wall parts, each separating one liquid supply passage and its corresponding pressure generation part from another liquid supply passage and its corresponding pressure generation part;

a sealing section, sealing the flow passage formation section; and a head case section, provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section corresponding to both the liquid supply passage partition wall parts and the liquid supply passage of the flow passage formation section, and the sealing section has a first area and a second area being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;

wherein the head case section is separated by a vacancy from the sealing section at the first area opposed to the liquid supply passage;

wherein the sealing section has a first part and a second part being greater in thickness than the first part;

wherein the first area of the sealing section is formed with the first part;

wherein the second area of the sealing section is formed with the first part and the second part;

wherein the head case section, provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section;

wherein the second part is placed in the liquid supply passage partition wall parts; and

wherein the second part to which the head case section is joined has a width smaller than a width of the corresponding liquid supply passage partition wall part.

12. (Previously presented) The liquid ejection head as set forth in claim 11, wherein the second part is provided along a longitudinal direction of each of the liquid supply passage partition wall parts.

13. (Previously presented) The liquid ejection head as set forth in claim 11, wherein the sealing section corresponding to a portion where the head case section is placed and the liquid supply passage is placed, is formed with the first part only; and

wherein the second part of the sealing section in the portion where the head case section is placed is formed like comb teeth.

14. (Currently Amended) ~~The A liquid ejecting head as set forth in claim 24,~~
comprising: a flow passage formation section including:
a plurality of nozzle openings, ejecting liquid therefrom;
a plurality of pressure generation parts, corresponding to the nozzle openings
respectively;
a plurality of liquid supply passages, communicating with the pressure generation parts
respectively for supplying liquid thereto; and
a plurality of partition wall parts, each separating one liquid supply passage and its
corresponding pressure generation part from another liquid supply passage and its corresponding
pressure generation part;

a sealing section, sealing the flow passage formation section; and a head case section,
provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall
parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section
corresponding to both the liquid supply passage partition wall parts and the liquid supply passage
of the flow passage formation section, and the sealing section has a first area and a second area
being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;

wherein the head case section is separated by a vacancy from the sealing section at the
first area opposed to the liquid supply passage;

wherein the sealing section has a first part and a second part being greater in thickness
than the first part;

wherein the first area of the sealing section is formed with the first part;

wherein the second area of the sealing section is formed with the first part and the second
part;

wherein the head case section, provided on the flow passage formation section through
the sealing section, has an expansion coefficient different from that of the flow passage
formation section;

wherein the flow passage formation section includes a plurality of island portions which
are formed in the liquid supply passages respectively along a longitudinal direction of the liquid
supply passages to prevent pressure leakage of the pressure generation parts;

wherein the second part is formed corresponding to the island portions of the flow passage formation section where the head case section is placed;

wherein the second part has a width smaller than a width of the corresponding island portion; and

wherein the first part of the sealing section is formed corresponding to the liquid supply passage partition wall part where the head case section is placed.

15. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the head case section, provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section,

wherein the second part of the sealing section placed in the liquid supply passage partition wall part, to which the head case section is joined has an area smaller than an area of the corresponding liquid supply passage partition wall parts.

16. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein a plurality of first parts are formed on the sealing section corresponding to the liquid supply passages.

17. (Previously Presented) The liquid ejecting head as set forth in claim 24, wherein the sealing section includes a metal thin film and a resin thin film which are overlapped;

wherein the resin thin film is placed so as to face the flow passage formation section; and

wherein the first part is formed of the resin thin film with the metal thin film removed.

18. (Previously Presented) The liquid ejecting head as set forth in claim 17, wherein the metal thin film is formed on the sealing section of the portions corresponding to the partition wall parts as the second part.

19. (Previously Presented) The liquid ejecting head as set forth in claim 17, wherein an island portion is formed on each of the liquid supply passages so as to prevent a reduction in pressure in each of the pressure generation parts; and

wherein the second part is formed on the sealing section corresponding to at least the pressure generation part side of the island portion.

20. (Currently amended): A liquid ejecting apparatus, comprising:

a liquid ejecting head including:

a flow passage formation section having:

a plurality of nozzle openings, ejecting liquid therefrom;

a plurality of pressure generation parts, corresponding to the nozzle openings respectively;

a plurality of partition wall parts, each separating one liquid supply passage and its corresponding pressure generation part from another liquid supply passage and its corresponding pressure generation part; and

a sealing section, sealing the flow passage formation section; and a head case section, provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section corresponding to both the liquid supply passage partition wall parts and the liquid supply passage of the flow passage formation section, and the sealing section has a first area and a second area being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;

and

wherein the head case section is separated by a vacancy from the sealing section at the first area opposed to the liquid supply passage; and

wherein the second area is placed in a side close to the pressure generation parts relative to the first area.

21. (Previously Presented) The liquid ejecting apparatus as set forth in claim 25, wherein the head case section, which is provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section; and

wherein the second part inside of the area where the head case section is provided on the sealing section is placed in a part of each of the liquid supply passage partition wall parts.

22. (Currently Amended) ~~The A liquid ejection-ejecting apparatus as set forth in claim 25, comprising:~~

a liquid ejecting head including:

a flow passage formation section having:

a plurality of nozzle openings, ejecting liquid therefrom;

a plurality of pressure generation parts, corresponding to the nozzle openings
respectively;

a plurality of partition wall parts, each separating one liquid supply passage and its
corresponding pressure generation part from another liquid supply passage and its corresponding
pressure generation part;

a sealing section, sealing the flow passage formation section; and a head case section,
provided on the sealing section,

wherein the partition wall parts respectively include liquid supply passage partition wall
parts which separate adjacent liquid supply passages;

wherein the sealing section seals an area of the flow passage formation section
corresponding to both the liquid supply passage partition wall parts and the liquid supply passage
of the flow passage formation section, and the sealing section has a first area and a second area
being greater in thickness than the first area;

wherein both the first area and the second area are opposed to the liquid supply passage;

wherein the head case section is separated by a vacancy from the sealing section at the
first area opposed to the liquid supply passage;

wherein the sealing section has a first part and a second part being greater in thickness
than the first part;

wherein the first area of the sealing section is formed with the first part;

wherein the second area of the sealing section is formed with the first part and the second
part;

wherein the head case section, which is provided on the flow passage formation section through the sealing section, has an expansion coefficient different from that of the flow passage formation section;

wherein the second part is placed in the liquid supply passage partition wall parts; and

wherein the second part to which the head case section is joined has a width smaller than a width of the corresponding liquid supply passage partition wall part.

23. (Previously Presented) The liquid ejecting apparatus as set forth in claim 25, wherein a plurality of first parts are formed on the sealing section corresponding to the liquid supply passages.

24. (Previously Presented) A liquid ejecting head as set forth in claim 1, wherein:
the sealing section has a first part and a second part being greater in thickness than the first part;

the first area of the sealing section is formed with the first part; and

the second area of the sealing section is formed with the first part and the second part.

25. (Currently Amended) ~~A~~The liquid ejecting head ~~apparatus~~ as set forth in claim 20, wherein:

the sealing section has a first part and a second part being greater in thickness than the first part;

the first area of the sealing section is formed with the first part; and

the second area of the sealing section is formed with the first part and the second part.